

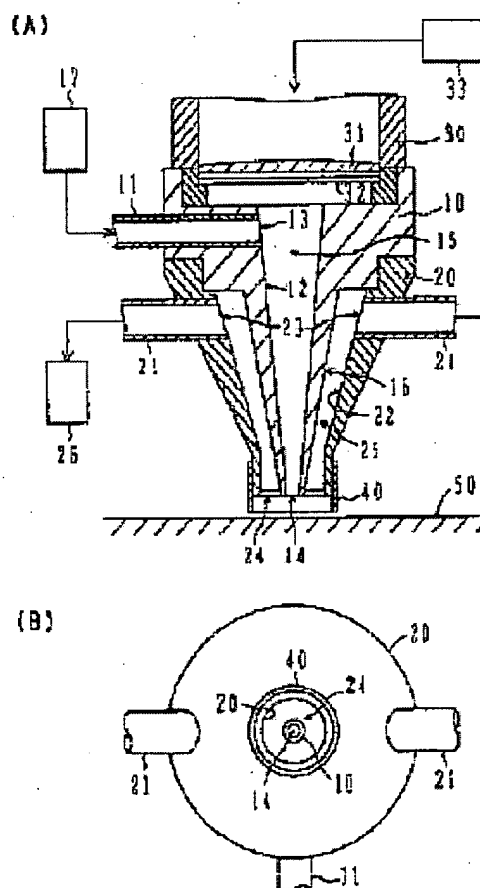
# LASER BEAM MACHINING HEAD, DEVICE, AND METHOD

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## Abstract of JP9192870

**PROBLEM TO BE SOLVED:** To suppress re-attachment of the debris to a work by sucking the assist gas, and removing the debris in the vicinity of the surface of the work.

**SOLUTION:** The laser beam is converged by a converging lens 31 to radiate the laser beam on the surface of a work 50. The part irradiated with the laser beam is machined. The assist gas such as He, Ar, and O<sub>2</sub> is fed into a gas introducing passage 15 through a gas piping 11 simultaneously with irradiation of the laser beam, and the assist gas is ejected from a gas nozzle 14 to a part to be machined. Most of the ejected assist gas is sucked from a gas suction port 24 into a gas discharge passage 25, and discharged in the vicinity of the part to be machined through a gas piping 21. The debris scattered in the laser beam machining can be efficiently removed from the vicinity of the machined part.



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